

each prefabricated hole formed in the solid glass sheet having an associated conductive solder ball bond pad formed on the upper surface of the solid glass sheet in proximity to said prefabricated hole;

adhesive material disposed between the upper surface of the wafer substrate and the lower surface of the solid glass sheet to affix the solid glass sheet to the wafer substrate such that each prefabricated hole in the solid glass sheet is aligned with an associated die bond pad formed on the integrated circuit die;

for each conductive solder ball bond pad formed on the upper surface of the solid glass sheet, a region of conductive material formed in electrical contact with said conductive solder ball die bond pad and extending through the associated prefabricated hole in the solid glass sheet and through the adhesive material and in electrical contact to the die bond pad associated with said prefabricated hole; and

for each conductive solder ball bond pad formed on the upper surface of the solid glass sheet, a conductive solder ball formed on said conductive solder ball bond pad to thereby provide an electrical connection between said conductive solder ball and an associated die bond pad.

60. (New) A semiconductor integrated circuit wafer scale structure as in claim 59, and wherein the solid glass sheet has a coefficient of thermal expansion that is substantially the same as the coefficient of thermal expansion of the wafer substrate.

61. (New) A semiconductor integrated circuit wafer scale structure as in claim 59, and wherein the wafer substrate comprises silicon.

62. (New) A semiconductor integrated circuit wafer scale structure as in claim 59, and wherein the conductive solder ball bond pads comprise a metal selected from the group consisting of aluminum, nickel, gold and copper.

63. (New) A semiconductor integrated circuit wafer scale structure as in claim 59,

64. (New) A semiconductor integrated circuit wafer scale structure as in claim 59, and wherein the region of conductive material comprises a conductive polymer.

65. (New) A semiconductor integrated circuit wafer scale structure as in claim 59, and further comprising:

a non-conductive mask formed on the upper surface of the solid glass sheet and patterned to facilitate formation of the conductive solder balls on the conductive solder ball bond pads.

66. (New) A semiconductor integrated circuit wafer scale structure comprising:

a semiconductor wafer substrate that includes a plurality of semiconductor integrated circuit die formed on an upper surface of the wafer substrate, each individual semiconductor integrated circuit die including a plurality of conductive die bond pads formed on an upper surface of said integrated circuit die;

a unitary, substantially planar solid glass sheet having substantially the same size as the wafer substrate and having a plurality of prefabricated holes formed therethrough from an upper surface of the solid glass sheet to a lower surface of the solid glass sheet, each prefabricated hole formed in the solid glass sheet having an associated conductive solder ball bond pad formed on the upper surface of the solid glass sheet in proximity to said prefabricated hole, the conductive solder ball bond pad including a portion that extends into said prefabricated hole to cover sidewalls of said prefabricated hole;

adhesive material disposed between the upper surface of the wafer substrate and the lower surface of the solid glass sheet to affix the solid glass sheet to the wafer substrate such that each prefabricated hole in the solid glass sheet is aligned with an associated conductive die bond pad formed on the integrated circuit die;

for each conductive solder ball bond pad, a conductive plug formed in the prefabricated hole in the solid glass sheet associated with said conductive solder ball bond pad, the conductive plug extending into the portion of said conductive solder ball bond

adhesive material to be in electrical contact with the conductive die bond pad associated with said prefabricated hole; and

for each conductive solder ball bond pad, a conductive solder ball formed thereon to thereby provide an electrical connection between said conductive solder ball and an associated conductive die bond pad.

67. (New) A semiconductor integrated circuit wafer scale structure comprising:
a semiconductor wafer substrate that includes a plurality of semiconductor integrated circuit die formed on an upper surface of the wafer substrate, each individual semiconductor integrated circuit die including a plurality of conductive die bond pads formed on an upper surface of said integrated circuit die;

a unitary, substantially planar solid glass sheet having substantially the same size as the wafer substrate and having a plurality of prefabricated holes formed therethrough from an upper surface of the solid glass sheet to a lower surface of the solid glass sheet, each prefabricated hole formed in the solid glass sheet having a conductive solder ball bond pad structure associated therewith, the conductive solder ball bond pad structure including a first portion formed on the upper surface of the solid glass sheet in proximity to said prefabricated hole and a second portion that extends through the associated prefabricated hole and through the adhesive material to be in electrical contact with the die bond pad associated with said prefabricated hole;

each conductive solder ball bond pad structure having a conductive solder ball formed on the first portion of said conductive solder ball bond pad structure to thereby provide an electrical connection between said conductive solder ball and an associated conductive die bond pad.--